

099140-101501

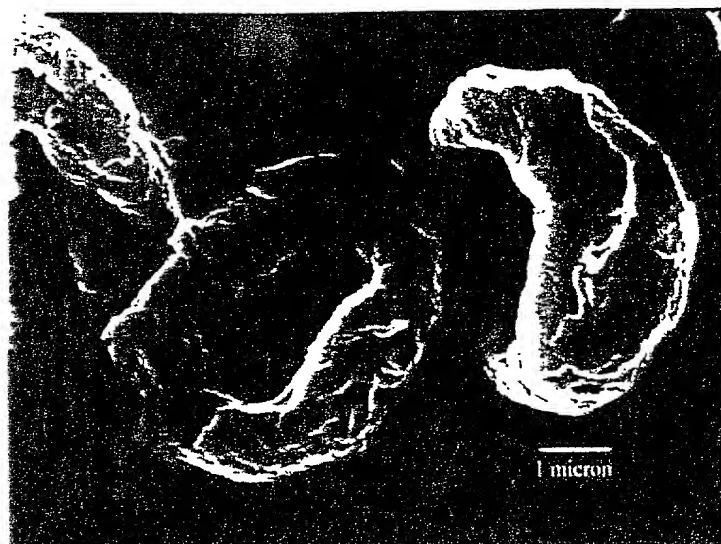


Fig. 1

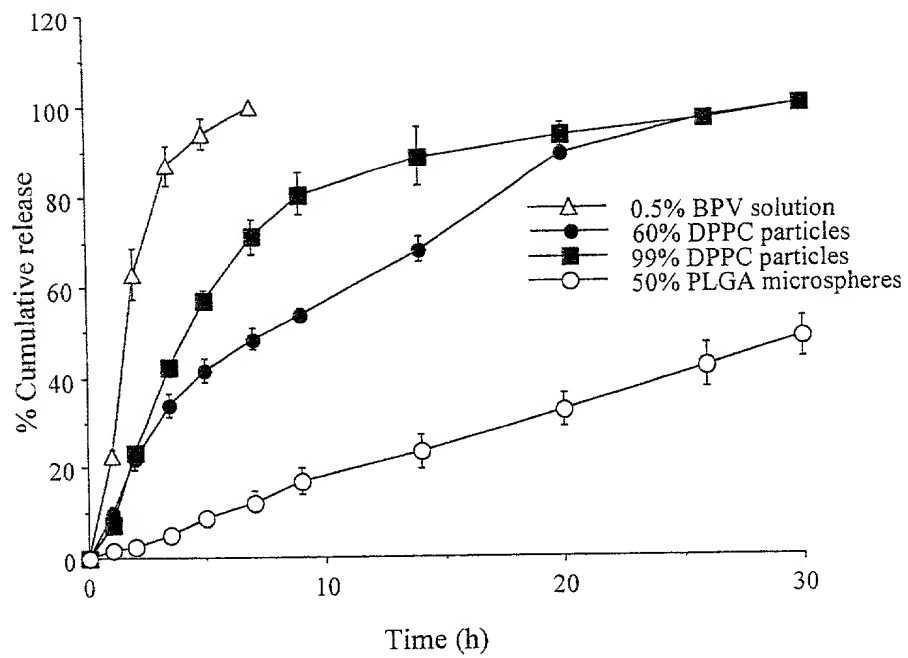


Fig 2

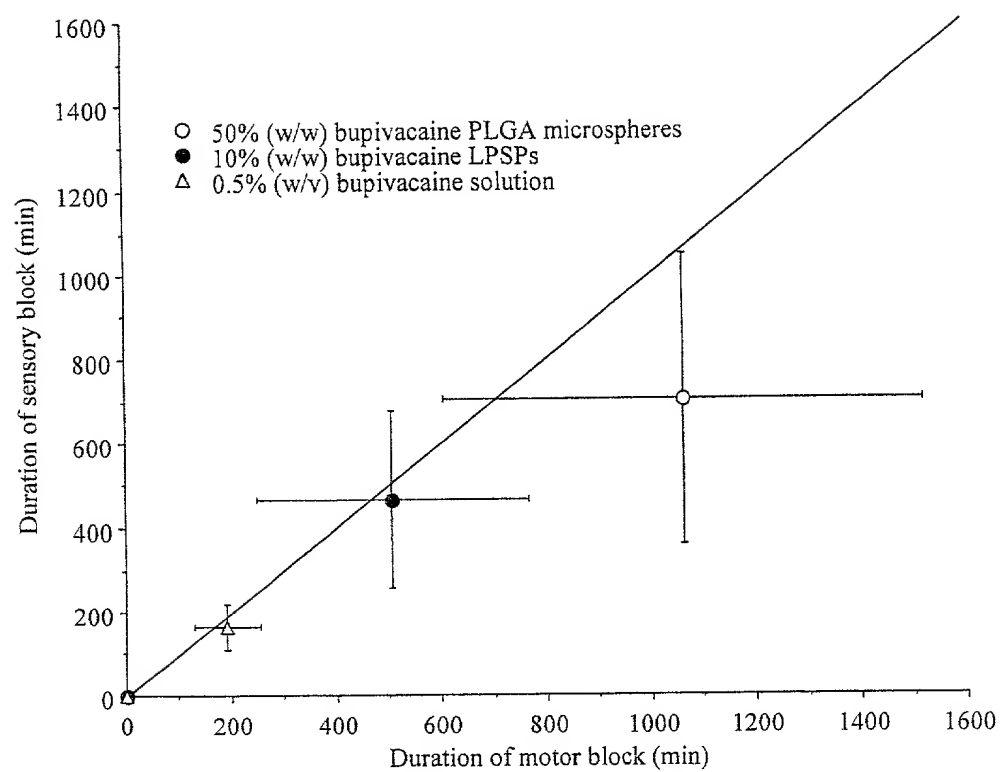


Fig 3

Figure 1 is a line graph showing the thermal latency (in seconds) over time (in minutes) for two groups: 50% (w/w) bupivacaine PLGA microspheres (filled circles) and 10% (w/w) bupivacaine LPSP (open circles). The y-axis represents Thermal latency (sec) from 0 to 7, and the x-axis represents Time (min) from 0 to 600. A horizontal line at approximately 2.0 seconds indicates the Baseline Latency. Error bars are shown for each data point. P-values for comparisons between the two groups at various time points are indicated below the x-axis: p=0.5 at 50 min, p=0.49 at 100 min, p=0.57 at 150 min, p=0.15 at 250 min, p=0.17 at 400 min, and p=0.14 at 500 min.

Time (min)	50% (w/w) bupivacaine PLGA microspheres (sec)	10% (w/w) bupivacaine LPSP (sec)	p-value
50	~3.8	~3.2	0.5
100	~3.8	~3.1	0.49
150	~2.6	~2.4	0.57
250	~2.0	~2.3	0.15
400	~2.1	~2.6	0.17
500	~2.0	~2.3	0.14

Fig 4

TOPOT-091860

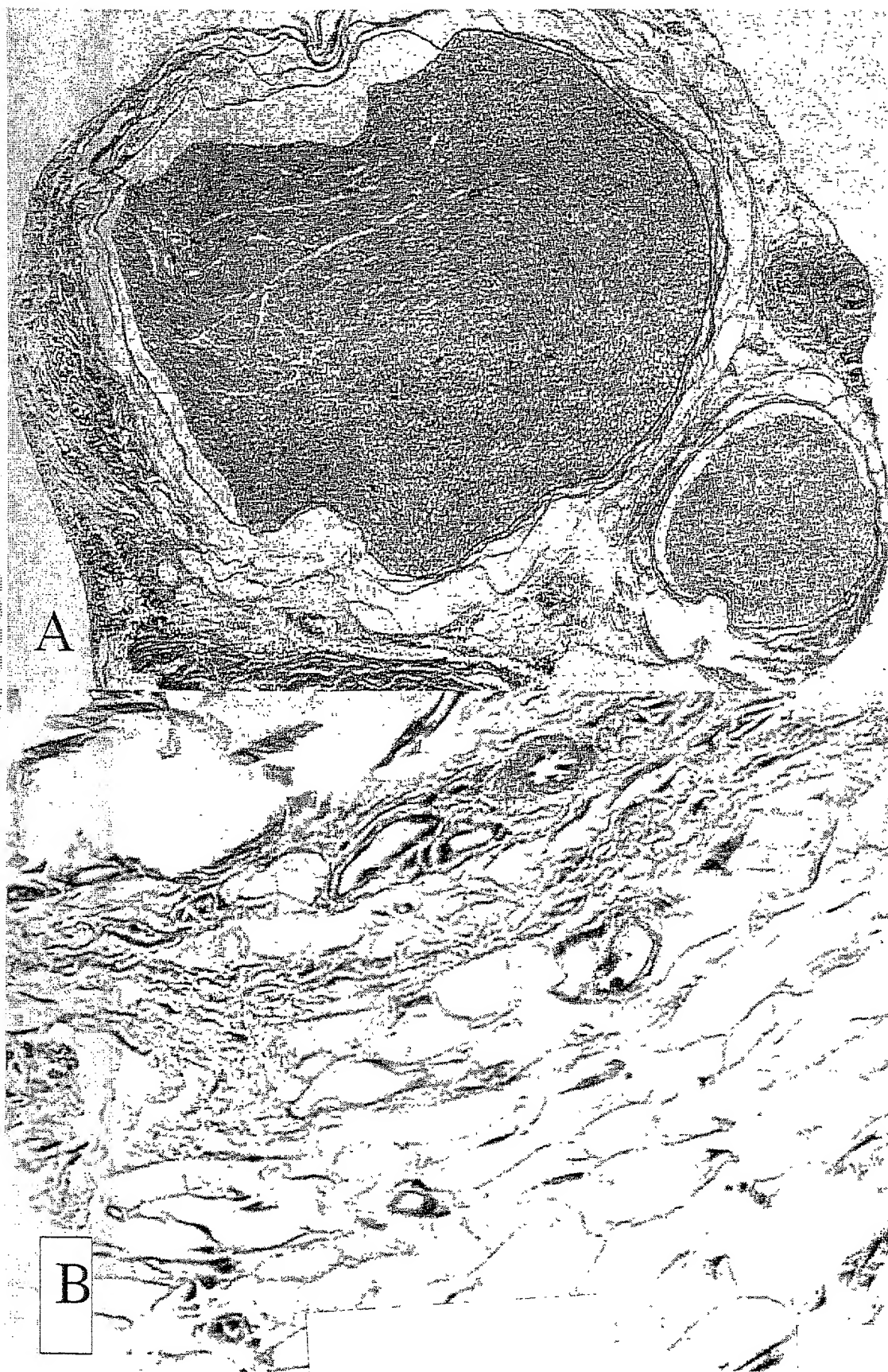


Fig 5

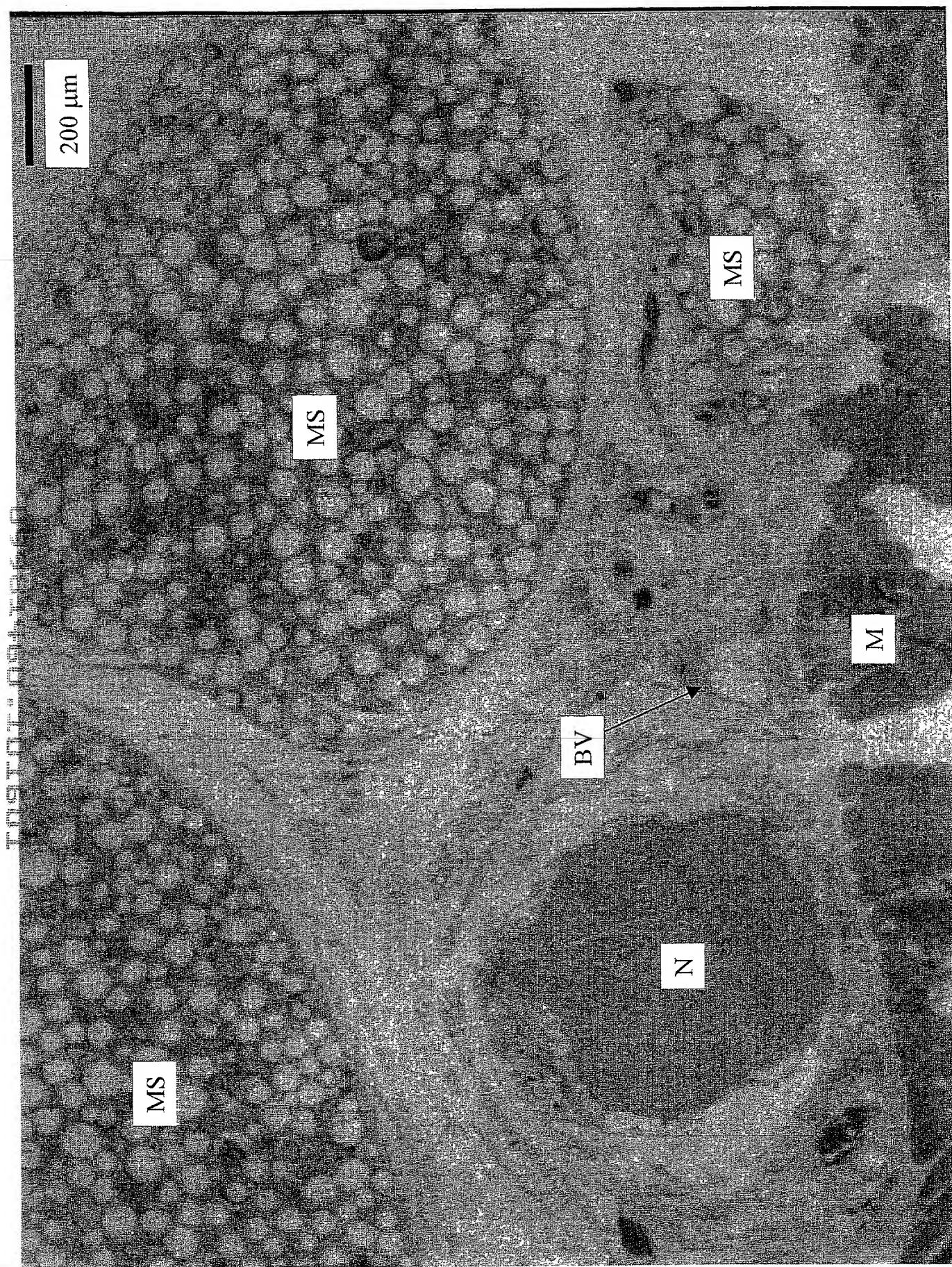


Fig. 6

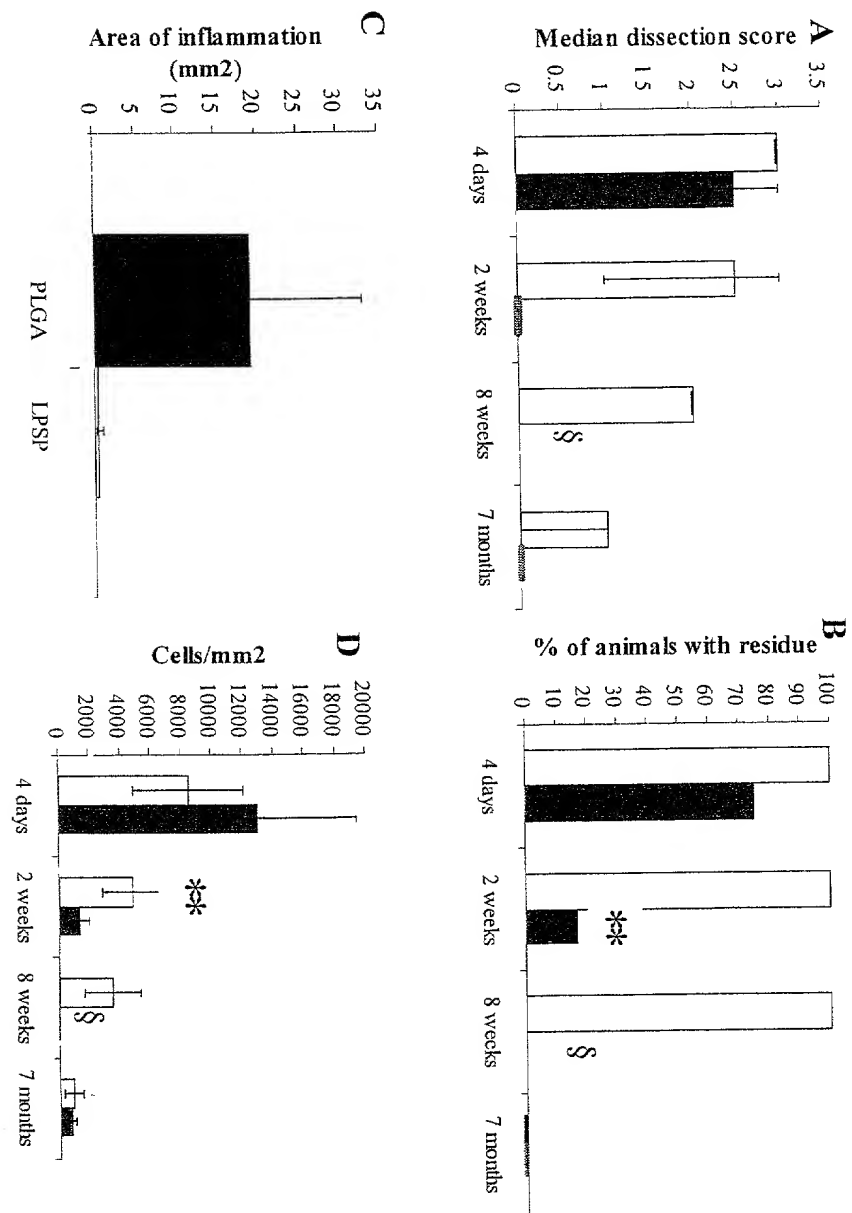


Fig. 7

0991450-101501

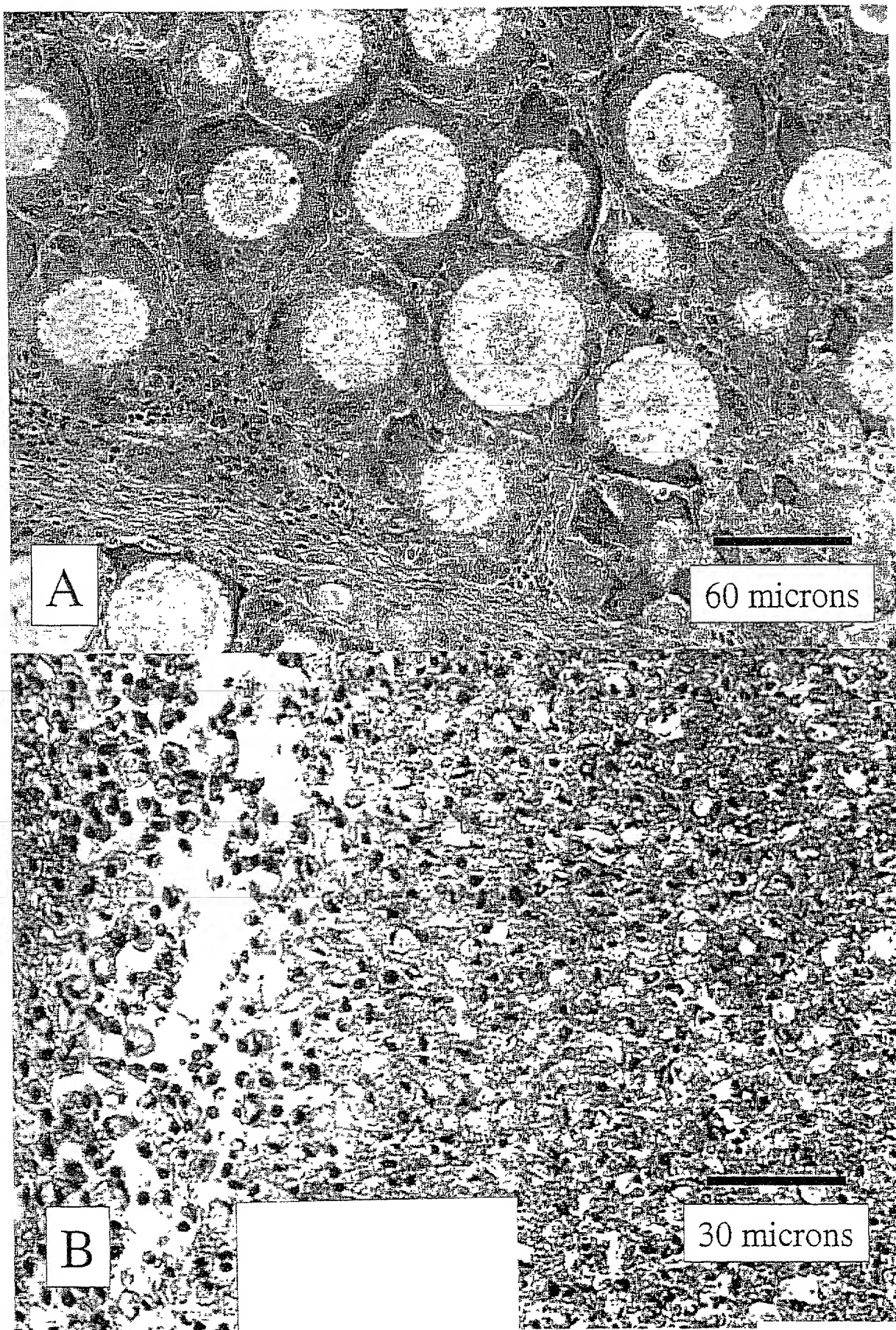


Fig. 8

FOSTOT-094T8660

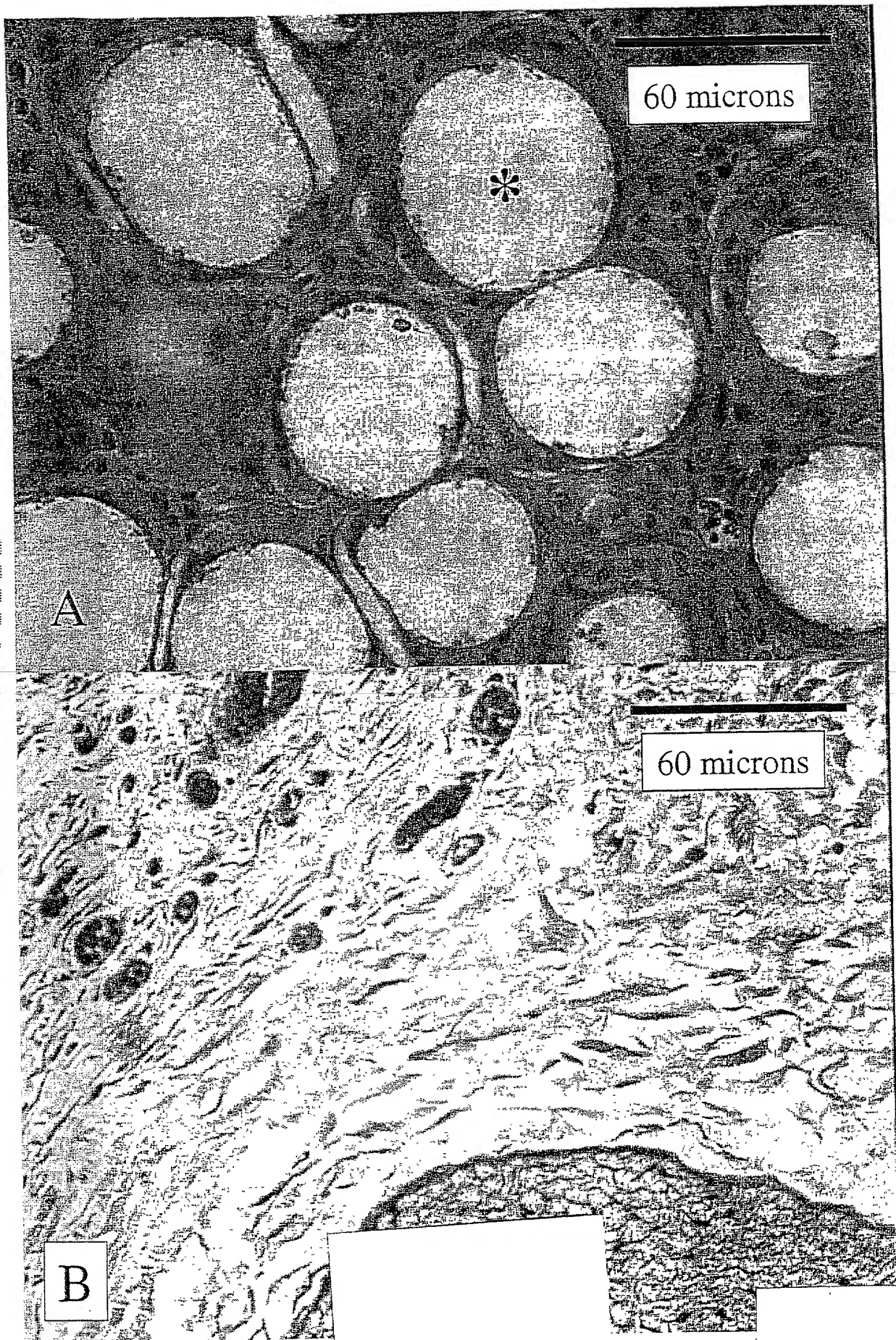


Fig 9

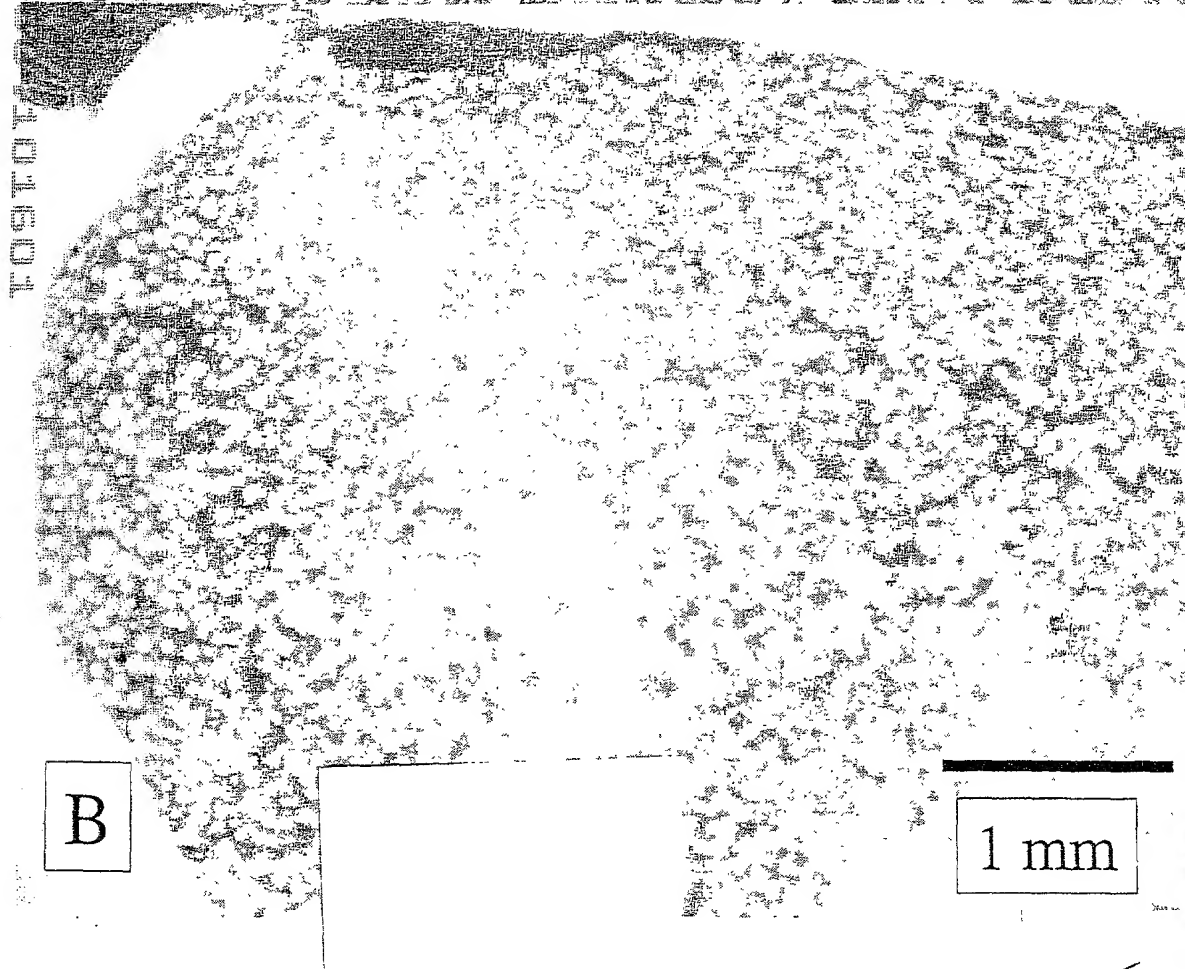
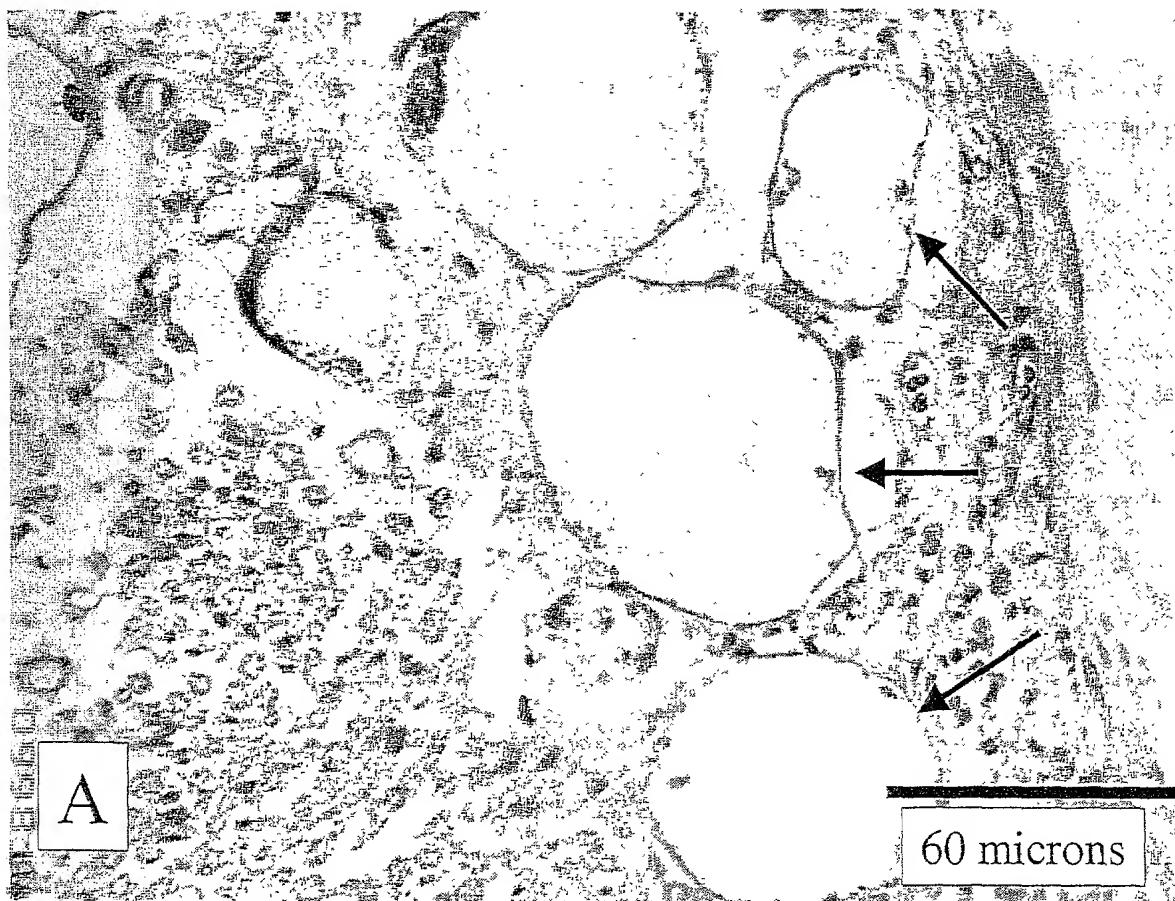


Fig. 10

In this embodiment, dipalmitoylphosphatidylcholine was dissolved in ethanol, lactose, albumin, and DNA (the gene for beta-galactosidase) were dissolved in water. The two solutions were mixed, and spray dried. The resulting particles ("DNA particles" below) were then analyzed.

In the following experiment, 5mg of DNA particles were incubated at 37C in the presence of 1.5mls of phosphate buffered saline (PBS) under mild agitation. The particles were then isolated by centrifugation and then the DNA was extracted by the addition of 100 microlitres of 2% SDS solution, followed by 100 micolitres of phenol/chloroform. 30 microlitres of the aqueous phase was added to 5 microlitres of DNA gel loading buffer, and loaded onto a 0.8% agarose gel containing ethidium bromide. The gel was run at 80 volts for ~1.5 hrs, and a picture was taken under UV illumination using a digital camera.

This gel clearly demonstrates that after one hour of shaking in the presence of PBS, DNA is still retained in the particles. Furthermore, this DNA is largely undamaged, indicating that the DNA encapsulation procedure used does not significantly damage the DNA.

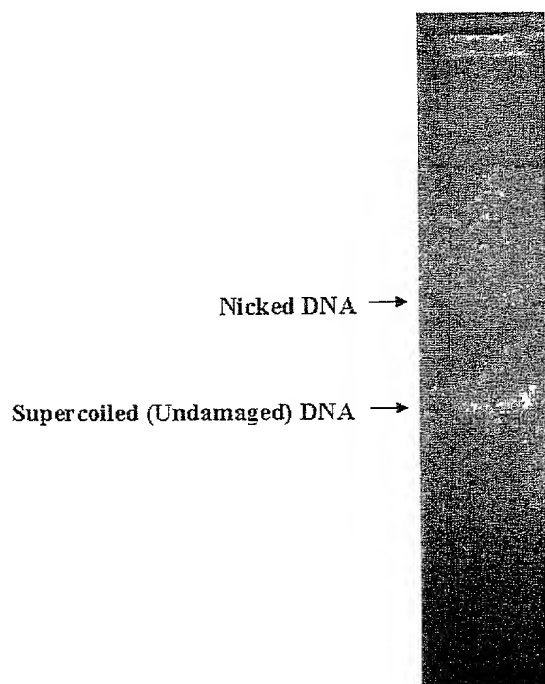


Fig. 11